

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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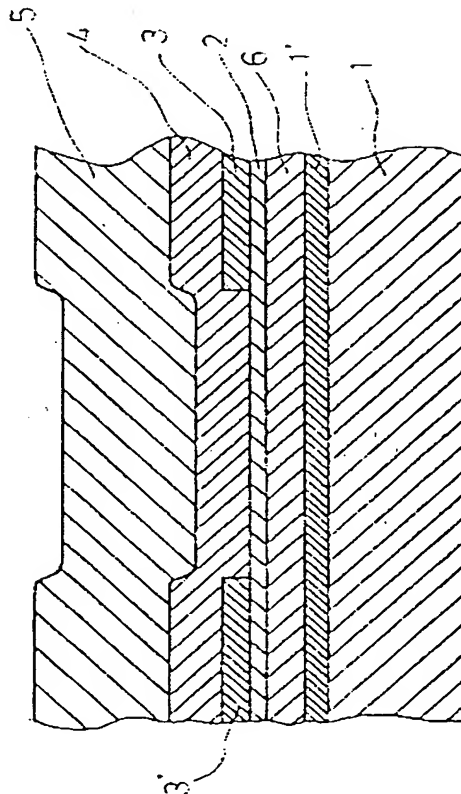
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APPLICANT : KYOCERA CORP;

INVENTOR : OGAWA GENICHI;

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TITLE : THERMAL HEAD AND MANUFACTURE  
THEREOF



ABSTRACT : PURPOSE: To enable the surface temperature of a heating resistor to be stably raised and enable high-speed printing to be conducted on a thermal recording paper for a long time, by newly providing a layer of silicon nitride doped with a fixed quantity of oxygen between a glaze layer and a heating resistor film.

CONSTITUTION: A layer 6 of  $\text{SiN}_x\text{O}_y$  (wherein  $0.2 < x < 1.1$ ,  $0.2 < y < 1.8$ ) is newly provided on the glaze layer 1' of an alumina ceramic substrate 1, and the heating resistor layer 2 is provided thereon. The layer 6 prevents the heating resistor on the negative electrode side from being deteriorated due to diffusion of alkali ion impurities such as  $\text{Na}^+$  and  $\text{K}^+$  from the glaze layer beneath the resistor into the resistor during application of pulsed electric power, and since the layer 6 is formed of a high melting point substance, the glaze beneath the resistor layer is prevented from being deformed through melting, even when the surface temperature of the resistor is raised to a high temperature. In addition, the adhesion of the layer 6 to the glaze and the resistor is extremely favorable. Accordingly, the useful life of the heating resistor can be markedly prolonged.

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